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ORIGINAL ARTICLES.

Some Points in the Pathology of Carcinoma.

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The pathology of carcinoma is a subject that has engaged the attention of medical men for years, but it is only within the last few years that any real progress has been made in the scientific investigation of it.

Many theories have been advanced from time to time concerning the etiology, nearly all of which have been based on propositions the demonstrations of which have never been accomplished, and consequently have never been accepted by pathologists.

Conheim taught the theory of embryonal remaines; that is, that in the development of the body there may be a number of cells more than are needed for the complete development of the organ or tissue. These cells enter a resting state, and at some future time certain exciting causes might lead them to proliferate and thus form a tumor. This theory, while a very beautiful one, certainly lacks confirmation, particularly in the case of epithelial neoplasms. The fact that congenital moles and nævoid growths may take on a malignant character, as well as the fact that certain tumors always occur about certain locations, is insufficient argument in support of this theory; for the tumors of this description and location are probably subjected to other influences, as we will consider later.

While Virchow has succeeded in demonstrating the presence of islets of cartalaginous tissue in the shaft of long bones, from which enchondromata have arisen, yet no one has ever succeeded in demonstrating the presence of embryonal epithelial cells in the adult physiological tissue.

A later theory which has been advanced in connection with carcinoma, as well as other tumors, is that the cells of the neoplasms have escaped from nervous influences. This theory is based on the supposition that all cells are destined to perform a physiological function, and are subjected to a greater or less amount of nervous influences. According to this theory the cells of malignant tumors have escaped from this nerve control, and instead of their force being spent in performing their physiological function, it seems to be spent in reproduction.

That there is a pathological change in the structure of nerve bundles and nerve fibers in and around these tumors is easily demonstrated, yet no one has succeeded in demonstrating the relation existing between the cells of these malignant tumors and these pathological nerves. That the pathological change in these nerve bundles or nerve fibers is secondary to the proliferation of cells in the neighborhood is probably quite true.

No such change, it is quite true, can be demonstrated in the neighborhood of cell proliferation that is following a physiological course. Another substantial argument in support of this theory is the manner in which nerves are distributed to the various organs and their cells. It has been demonstrated that primitive nerve fibrillæ do, in some manner, have an ending in the cells of certain organs and tissues; but severing this peripheral distribution and the central connection, does not produce cell proliferation, but, on the contrary, may lead to atrophy in the tissue of that nerve distribu-

tion. Just how far nutrition and cell life depends upon nerve influence we are unable to determine.

An older theory, lately revived, is that there is a specific cancer cell that has no relation with the epithelial cell. This theory is advocated by Adamkiewicz, who claims that these cells are parasitic, and that they produce a toxine which is itself destructive of the cells and thus curative of the disease. This theory has not met with a very warm reception from pathologists. However good the results which he has obtained in his clinical work, we cannot accept his theoretical work, for it would be quite an impossibility to expect that a parasite would follow in the pathological growth exactly the shape and structure of the histological cell in the physiological tissue.

The latest theory advanced — and one which has no small following — one based on scientific facts and demonstrations, and which has the widest acceptance among scientific men, is the parasitic theory.

The presence of certain parasites — not bacteria — causing disease and occurring in the tissues, the blood and the evacuations of man and animals, has been demonstrated beyond doubt. We are well acquainted with the plasmodium malaria, a parasite living at the expense of the red blood corpuscles in the persons in which it is found, and the effect it produces in the animal economy. The coccidium oviforme occurring in the liver of rabbits, the amœba coli occurring in the evacuations of dysentery, all belong to the same order of organisms, and are all parasites. The plasmodium malaria is an intra-cellular parasite, and corresponds in that character to the parasite found in carcinoma; the other two are extra-cellular.

The parasite called the coccidium carcinoma does not belong to the bacteria, which are vegetable organisms, but belongs to the protozoa or unicellular animal forms. (Park.) The coccidæ carcinoma probably constitute a class of minute animal forms under the order sporozoa, an order of the subkingdom protozoa. The peculiar characteristics of the sporozoa consist in their reproductions — the period of incystation and the breaking up of this protoplasm into a large number of so-called spores. (Carpenter.) They are all essentially parasites. (Park.)

The coccidæ carcinoma, in addition to the general characteristics of the sporozoa, presents the following points in their morphology, viz.: They are unicellular; they may or may not contain a nucleus; they may or may not contain a microphyl; the protoplasm may or may not be granular, and is more highly refractile than the protoplasm of the host cell. In shape they vary, some being oval, some round, some vermiform, semilunar, or falsiform. They have a capsule or highly resisting wall, which may be regular in outline or it may be radically striated. They stain readily, especially with hæmatoxylon and the basic analine dyes. As regards their host, they are intra-cellular or intra-nuclear. I have found them most frequently in the nucleus. Occurring in the protoplasm of the cell, they enlarge, crowd the nucleus to one side, and may even lead to the destruction of the nucleus and the formation of a sprocyst. These unicellular forms may be demonstrated in the inter-cellular spaces. That these inter-cellular organisms are identical with the intra-cellular is quite probable.

That these bodies are not cellular degenerations is quite probable from the fact that they stain readily and brightly with the stains mentioned. This cannot be said of cell degenerations occurring elsewhere than in these tumors. That they are not endogenous cell formations is probable from the fact that they are found in various relations with the cell, some being inter-cellular, some intra-cellular, and some intra-nuclear; that they form cystic cavities in the cell, displacing the protoplasm, crowding out the nucleus and even converting the cell into a small cyst; that these cells may be seen undergoing the process of reproduction; that they so closely resemble other forms of animal life already mentioned, the biological characters of which are quite well known and the parasitism accepted by authorities. Finally, it has been demonstrated that the leucocytes have a phagocytic action on them when they have become inter-

cellular. For these reasons I am lead to believe that these organisms or cell inclusions are not degenerations, but organized unicellular matter.

Numerous attempts have been made to isolate, cultivate and inoculate animals with organisms, and thus produce the disease, all of which have met with failure. It is quite possible to ingraft pieces of living carcinoma from one part of the body to another, but ingrafting from one animal to another has not been successful. The experiment in grafting tissue from one part of the animal to another is no proof of the proposition advanced, but merely a surgical experiment.

Cultivation of these forms of animal life, although unsuccessful at present, may be successful at some future time, when we are better acquainted with the organism and shall have discovered some medium in which it will grow. These organisms, while they may lead a saphrophytic existence, are probably essentially parasitic. If they are purely parasitic, the difficulty in cultivation is apparent. The bacillus tuberculosis is a parasitic bacterium, and bacteriologists well know the difficulty experienced to induce this germ to lead a saprophytic existence. Even this question whether or not all forms of the bacillus tuberculosis can be induced to lead a saprophytic existence is an open one. If this is true of parasitic vegetable life, I see no reason why it may not be true of parasitic animal life. The forms of many bacteria with which we are most familiar have been known for many years, but it is only little more than a decade since we were able to cultivate them, and thus become fairly acquainted with their action on tissue. In many of the diseases which we regard as of undoubted bacterial origin, it is impossible to demonstrate a specific germ. If we accept the theory of the bacterial origin of these diseases from their clinical manifestations, why not accept the parasitic origin of carcinoma when we are well acquainted with the clinical manifestations and have pointed out to us these organisms, the almost constant presence of which in the tissues of carcinomatous tumors has been demonstrated, as well as the analogous conditions presented by other members of this subkingdom of protozoa, the action of which is well known.

The coccidium oviforme produces a growth in the liver of the rabbits somewhat resembling that found in the tissue of carcinomatous tumors. The coccidium perforans — an organism resembling the coccidium oviforme — found in the intestinal epithelium of dogs, cats and rabbits, has also been found in a similar situation in man. (Delafield and Pruden.) This organism produces inflammatory infiltrates and neoplastic growths in these locations. (Park.)

The coccidium carcinoma, when an intracellular parasite, seems to lead to the destruction of the cell. The nucleus, however, resists this action for quite a long time. While the organism produces a degenerative change in the protoplasm of the cell, it seems to cause also a proliferation of adjoining cells. It is claimed by some investigators that these organisms are always to be found in the cells of epithelial neoplasms, and not in physiological tissues, unless from extension or transportation from a carcinomatous growth.

The coccidæ carcinoma can constantly be demonstrated in these epithelial neoplasms. Sondakewitch reports fifty-nine cases of carcinoma from various parts of the body, comprising tumors constituted of various epithelial tissues, in all of which he was able to demonstrate the presence of these parasites. Thoma found peculiar bodies in the nuclei of cancer cells which he regarded as parasites. Vanheukelom examined two hundred cases of cancer, and comes to the same conclusion. I have been able to demonstrate the presence of these bodies in all of the cancer tissue which I have had the opportunity of examining, some eight cases in all. This cancer tissue comprises various forms of epithelial neoplasms, with the exception of the cylindrical celled carcinoma; being tissue from the mammary gland, cervix uteri and the skin of the face. The organisms will be found in greater numbers and more characteristic in these tumors, the growth of which is rapid. They are also

found more numerous and more easily in granular carcinomata than in the epitheliomata of the skin and mucous membranes.

The life history of the coccidæ carcinoma is a very interesting one, and no better description can be given than that of Jackson Clark, who describes a case of epithelioma of the nose which abounded in unmistakable psorosperms, corresponding in every stage of their existence with those of the coccidium oviforme, and giving clear evidence of the following processes:

"1. A single psorosperm, or one formed by the conjugation of two becomes changed by the formation of a reticulum which extends outward from the nucleus till it fills the whole cell.

"2. The recticular plasmodium, usually surrounded by a capsule, consisting of the dead distended host cell, breaks up into rounded segments which keep the recticular structure, and stain faintly purple with acid hæmatoxylon.

"3. Within some of these daughter psorosperms fine filaments of chromatin appear. By the breaking up of the same, amœboid cells are set free, which multiply by division and are to be distinguished from leucocytes by treatment with acid hæmatoxylon.

"4. These amœboid bodies make their way in vast numbers into connective tissue spaces beyond the epithelial part of the growth. In the passage they separate epithelial cells, and thus facilitate down growth and detachment of small groups of cells. A considerable degree of inflammation is caused by this tissue invasion, with results similar to those seen in inflammatory papilloma.

"5. Later most of the amœba disappear and the resultant inflammation subsides. A small proportion enter epithelial cells and can there be detected with care, even in their non-nucleated stage. Those that remain are by this time the somewhat familiar psorosperms most abundant in and around cell nests. Arriving at a certain stage the cycle is renewed, and a fresh extension of growth takes place, sometimes with detachment of venous or lymphatic emboli and resulting metastasis." (Park.)

The great difficulty in examining tissues for these parasites, and the study of their life history, lies in the fact that nutrition is destroyed, heat radiation is going on rapidly and cellular changes are quickly produced; thus many steps in the study of the life history of these organisms is very difficult, if not impossible, and must necessarily remain in a speculative state.

These organisms are found not only in the cells of carcinomatous tumors, but may also be found in diseased tissues, which may ultimately lead to carcinoma. The manner in which these organisms seem to produce cell proliferation has already been mentioned, but the way in which they enter the animal economy is a very interesting one. It has been demonstrated that a variety of coccidæ may be found invading the skin in Padget's disease of the nipple. Wickham describes three stages after invasion:

"1. Thickening and disorganization of the epidermis, and inflammation of the corium.

"2. Elevation of the horny cells, lively escape of leucocytes which crowd aside the epithelial cells, proliferation of the rete mucosum, and the epithelium of the sweat, sebaceous and milk glands, and finally extensive infiltration of the cutis.

"3. Stage of carcinomatous growth in the superficial and glandular epithelium. In the beginning the parasites appear with or without a nucleus; they become surrounded later on with a double membrane; the protoplasm becomes granular, forming a sporiferous cyst; these may be found in the epithelium of the glands and pearly bodies, as well as the epidermis." (Park.)

From this point the extension and involvment of the mammary gland takes place. Invasion of the organisms must of necessity start from an abraded surface.

When we consider the numerous lesions to which the mammary gland is subject, it would seem an easy matter to explain the development of carcinoma of the breast as well as its great frequency. This may be said of other locations in which carcinoma is so frequently manifested, locations which are subject to frequent lesions and to irrita-

tion, as the tongue, the lip, the œsophagus, the pylorus, the rectum, the uterus, as well as other organs.

Another evidence in support of the theory that carcinoma is caused by a specific organism may be found in a case of ulcerating carcinoma of the breast, in which carcinoma was produced in the skin of the adjoining arm where it had frequently come in contact with the ulcerating furface. (Green.) Lately we have the report of a young man in whom an epithelioma of the tongue was developed by smoking the pipe of his father-in-law, who had died from a cancerous affection of the superior maxilla. (*International Journal of Surgery.*) Still another report comes of the case of a woman fifty years old who had a large squamous epithelioma upon the left labium minor. This ulcerated upon the surface, approximating the opposite labium; this was followed later on by small warty masses on the right labium minor on the surface in contact with the ulcerated growth. This growth proved to be squamous epitheliomata. (*International Medical Magazine.*) While the reports of such cases are rare, yet it does show that there must be a specific germ causing these lesions of these particular locations under these circumstances, and the presence of these tumors at these locations is not from transportation, but from local infection or inoculation.

The exact time for incubation of these germs is not known, but it has been surmised that the period varies from a few months to several years. It is probable that carcinoma is not a contagious but an infectious disease, infection taking place by means of soiled clothing or the use of articles which have been in contact with discharges from carcinoma, coming in contact with an abraded surface.

If for the sake of argument we accept the theory that carcinoma is caused by a specific organism, the whole chain of clinical manifestations seen in cases of carcinoma is easily explained. Malignancy will then resolve itself into the analogous manifestations that we see in tuberculosis, in syphilis, and in many of the acute infections or contagious diseases. We then will explain that carcinoma will only develop in persons whose tissues have not a physiological resistance to the invasion of these organisms. Certain conditions may diminish or destroy this resistance when infection and development may take place. Once that infection has taken place it becomes very hard to eliminate Inflammation and chronic irritation, as well as poor nutrition, lowers the vitality of cells. In youth the cells reproduce rapidly, repair exceeds waste, and resistance to disease under certain conditions is certainly great. Carcinoma seldom occurs in youth, therefore age is an important factor. Heredity is a third important factor in the physiological resistance of tissue, not only in carcinoma, but other diseases. The child, one or both of whose parents are not healthy, will inherit a weakened tissue. this may not be manifest in youth, but as age advances the tissue more readily deteriorates than the tissue of a child of robust parentage.

The term malignant is understood to apply to those forms of tumors that grow at the expense of surrounding tissue; that reproduce themselves in all their characteristics in distant parts of the body, and in which the phenomenon called cachexia is noticed at some time in their history. A malignant tumor then can only be produced when the physiological resistance is insufficient to withstand the invasion of these organisms.

The manner in which these tumors grow at the expense of the surrounding tissues has already been explained in connection with the observations of Jackson Clarke. Secondary growths, miscalled metastatic growths, may be also accounted for in connection with his observations. The manner in which this seems to be produced is by direct extension through lymph spaces of cell proliferation or by means of loosened epithelial cells being carried from the primary focus to some adjoining lymph gland, and there setting up a fresh carcinomatous process. The inter-cellular organisms observed in the lymph spaces are probably also carried to the adjoining lymph glands, but more likely in some part of their course they be-

come destroyed by the phagocytes. Parasites occurring intra-cellular and transported as mentioned to distant lymph glands are probably the ones concerned in the formation of the secondary growth, as they are the ones not subject to phagocytic action.

The secondary growth resembles the primary in its histological structure. If the primary growth is composed of speroidal cells, then the secondary growth is likewise composed of speroidal cells. If the primary growth is composed of columnar cells, then the secondary growth is composed of columnar cells. The character of the secondary growth will therefore seem not to depend on the presence of organisms. but on the multiplication of the characteristic cells which have been carried to that point. The carcinoma coccidæ may certainly play an important part in the proliferation of epithelial cells, but it cannot change the histological character of the host cell; that is, the organism occurring in a speroidal cell cannot produce a columnar cell, or occurring in a columnar it will not produce a squamous cell. The coccidæ carcinoma or any other organism cannot develop epithelial cells from tissue in which epithelial cells are absent. Virchow's dictum—*omnis cellula e cellula*—is just as true to-day as when the great pathalogist announced his cell doctrine.

If it be true that carcinoma is caused by a certain organism, then the whole phenomena, called cachexia, can be explained on scientific grounds. The manner in which these organisms act on the host cell, causing destruction of the protoplasm, has already been explained. If these organisms are either vegetable or animal in character, then there must be digestion, assimilation and waste. All diseases caused by a specifie organism, the morphology of which is familiar to us, produce a chain of symptoms referable to the formation of a poisonous material by the action of the germs on cell matter. We understand the phenomena of malarial fever pigmentation, as well as the other symptoms of that disease, the cause of which is widely admitted to be the plasmodium malaria. The nonelimination of toxine produces characteristic symptoms in every case of contagious or infectious diseases. If this be true of these diseases, why may it not be true of carcinoma, in which waste and nonelimination of these products is excessive. Cachexia then, in connection with carcinoma, is nothing more or less than the toxæmic characteristic of carcinoma, the same as a chain of symptoms following septic poisoning from bacteria.

We have endeavored to show the character and frequency of the presence of these organisms in the epithelial neoplasms of man. We have shown that other parasites of this order exist in the blood and tissues of man and animals, causing disease and producing a chain of symptoms somewhat analagous to those produced by the coccidæ carcinoma. If there are other parasitic diseases of man and animals, why may not carcinoma be caused by a parasite?

In the parasitic diseases mentioned, the parasitic etiology of which is undisputed, the bacteriological tests, isolation of the germ, cultivation and inoculation producing the characteristic disease, has never been successfully demonstrated. If we accept the parasitic etiology of these diseases without the bacteriological tests, why not accept the parasitic etiology of carcinoma, the bacteriological tests of which have never been successful.

The study of the parasitic theory of carcinoma has only just begun. Technology, improvement in lenses and apparatus for the laboratory has opened a rich field for investigation. Sometime in the near future, under these improved methods or new ones, not only the etiology of carcinoma, but also that of other diseases, the etiology of which we do not understand, will undoubtedly be known. No doubt when we have compared notes more fully, when the clinical characters of these tumors are reported more fully, pathologists will then perhaps be more in accord as to the etiology of the coccidæ carcinoma in epithelial neoplasms.

ONE of the best antidotes for carbolic acid is strong soaps.

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Topeka, Kansas, Saturday, January 20, 1894.

The Doctor in Politics.

THE doctor is affected by legislation as much as his neighbor and professionally, if any difference, militated against. His service in this state is not considered labor in the eyes of the law; and when his patient gets well, too often his business relation with the doctor abruptly ceases. Even a death-bed repentance, should recovery ensue, the patient often backslides before the doctor is paid. We are willing to run our chances in collecting our bills with the brethren, but the collection part is only one feature of the case.

The medical profession is expected to assist the state in legislating for the public health. In all matters pertaining to the prevention and removal of the causes producing disease he is required to furnish the ordinance and ammunition, level the piece and let the other fellows fire the shot and get the credit for the execution. When the work is done and his services are no longer needed, he is set aside to be used again at a convenient season.

This is not the fault of anyone but himself. A man is respected accordingly as he respects himself, among the laity or in the profession. A profession is judged by its members; and rights and positions are granted, and influence is obtained, and respect maintained at the present time by merit and compelling the world to grant reasonable demands. This cannot be done singly, but by a united effort. We are told in England parliament heeds the voice of the medical profession, and shapes legislation accordingly. In the United States the American Medical Association is just beginning to be heard in congress. State legislation can be secured by the action of the State Society. If our own State Society will take definite action next spring and bring its wants squarely before the legislature, and each physician will take an active part in the elevation of a representative, and then tell him what the State Society and the medical profession want, we will get.

We do not ask for anything but what is right and in justice belongs to us.

As a profession in this state we have lain dormant too long. Let us awake, arouse ourselves, unite and show a bold front to the political world of two or three thousand voters, and we will not be ignored in our just claims.

WE are requested to announce that Dr. Emory Lanphear, of Kansas City, has at his disposal a number of free beds in the hospital for radical cure of hernia, hysterectomy and amputation of the breast for cancer. These beds are for charity cases only, and can be used exclusively for the classes of cases mentioned.

SULPHATE of magnesia is also a good chemical antidote for carbolic acid poisoning.

What We May See in the Sputum.

Microscopical examinations have so far superceded the older methods that we frequently overlook many valuable points of diagnosis that might be observed with the unaided eye. We may first observe the quantity, reaction and consistence.

Patients with bronchitis or cavities, and especially cases of bronchiectasis, have the largest quantity.

Unless contaminated with vomited matter, sputum is always alkaline.

Mucous sputum usually occurs early in acute bronchitis.

Muco-purulent sputum in chronic bronchitis and in phthisis, or in later stages of acute bronchitis and pneumonia.

Purulent sputum (nearly pure pus) indicates a cavity or an empyema.

Serous sputum is fluid, and contains albumen, and is frothy. Characteristic of œdema of lungs.

Blood expectorated from the lungs is usually bright red, frothy and alkaline. From the stomach it is dark, nearly brown, and acid in reaction.

Coal soot makes a black or gray sputum.

Fibers and pieces of lung tissue indicate a cavity.

Fibrinous casts indicate fibrinous inflammations. These are frequently found in croupous bronchitis.

A Four Years' Course at Jefferson Medical College.

At a meeting of the faculty of Jefferson Medical College, held on January 8, 1894, it was unanimously resolved to institute a compulsory four years' course with the session of 1895-96.

This step was taken in order that the large clinical service of the Jefferson College Hospital (350 cases a day) might be utilized to the fullest extent in carrying out the desire of the faculty to provide advanced medical education of a practical character.

The Red Card.

It is a hard matter to train the people to understand or appreciate the importance of sanitary regulations governing families affected with contagious or infectious diseases.

Frequently the older members of a family would prefer to have the plague to seeing the glaring red card tacked up by their door.

They will not hesitate, however, to insist upon its use upon some other infected home, if there be a possible danger to their own household.

There can be no question as to the efficacy of this warning sign and the strict precautions of the quarantine if they would but consider the greatly lessened ravages of diphtheria and scarlet fever since the adoption of quarantine rules. The red card is no disgrace; the strict confinement to the huose is often as much and more protection to the afflicted than the well. It may be inconvenient, but it might be worse if schools were closed from an epidemic spread by carelessness and ignorance. Be strict in your compliance with sanitary regulations regardless of the caprice or obstinacy of your patients, and though they may denounce, others will bless you.

Irritable Cough.

A very severe cough without expectoration, but very annoying and persistent, may be the result of naso-pharyngeal catarrh and an accumulation of mucous in the vault. Sometimes when no apparent cause can be assigned for the cough and remedies fail to give relief, a probe covered with cotton and passed up behind the palate will reveal the trouble and the patient will locate the point of irritation, It should be remembered that the sensation to the patient is usually that of something in the larynx. In these cases washing the throat through the nose with an alkaline solution, following with alboline or vaseline, will often give more relief than cough remedies.

Nothing Succeeds Like Success.

That's our motto now. When we decided to publish a weekly journal it was with many doubts and misgivings as to the result. However, we have no reason to regret our venture.

To those who have given us encouragement and to those who have so promptly responded to our call for funds, we express our sincerest thanks and promise to you a journal well worth your money.

We want some good reports of cases and some papers. We know Kansas has as good physicians and as able writers as any state in the union.

We cannot publish every paper that we receive, but we will publish anything that is of interest or of value to the profession.

When you have an interesting case, write it up, and send us your report.

We promise that you will be treated fairly and honestly in every way in your dealings with the KANSAS MEDICAL JOURNAL.

Things to Remember.

ACIDS taken before meals lessen the flow of gastric juice.

ACIDS long continued impair digestion.

ACIDS increase the secretions of the alkaline glands.

MINERAL acids are astringent to the mucous membrane of the alimentary tract except nitric acid.

NITRIC acid relaxes the bowels.

ALKALIES increase the action of the acid glands.

AN alkali, given before meals, increases the flow of gastric juice.

THE alkalies are mildly cathartic.

THE long-continued use of alkalies have a tendency to destroy the blood and irritate the kidneys.

New Treatment of Syphilis.

Bonaduce has recently been making some investigations on the effect of blood serum upon syphilis. Blood was taken from children with hereditary syphilis. The serum, after being aseptically prepared and heated to destroy the toxines, was injected into a patient with primary syphilis.

He reports a complete cure after several months' treatment.

The principle of the treatment seems to be that micro-organisms produce a substance which is toxic to themselves and which is able to render the soil in which they grow immune against new infection. This antitoxine or immunizing substance is found in the blood and tissues together with the toxic element.

Heat destroys the toxine, but does not effect the antitoxine, so that the serum can be freed from its toxic elements by heat and still preserve the immunizing material.

By injecting this material from cases of hereditary syphilis in which there is supposed to be the greatest amount of the antitoxine, the resistance to the disease is increased in the subject.

Boric Acid in Typhoid Fever.

Dr. L. Tortchuisky reports 240 cases of typhoid fever in which he used boric acid, with only nine deaths.

Recovery was rapid and complete in the remaining 231 cases.

Begins the treatment with a dose of castor oil, to which is added five to ten drops of oil of turpentine. After the operation from this mixture, he begins the boric acid in doses of from twelve to fifteen grains, either in powder or solution, repeated three or four times a day.

Under this treatment all the prominent symptoms rapidly subside. After amelioration is well marked, the boric acid is discontinued and tonic administered.

Examine the Tonsils.

When the breath is bad and there is a bad taste in the mouth, the tonsils are frequently at fault.

If they are enlarged and the crypts patulous, accumulations of a whitish material are frequently found which give a peculiar odor to the breath.

If the crypts are carefully cleaned out and some mild astringent solution applied, the trouble soon disappears and the breath again becomes sweet.

MISCELLANEOUS.

Pneumonia Among the Mexicans.

BY J. M. FRANKENBURGER, M.D., CATSKILL, NEW MEXICO.

While the medical journals are at this time replete with the latest and most improved modes of treatment of cases of pneumonia, perhaps an account of the way in which they *have* to be treated in this country may make the practitioner who has the good fortune to practice in a large city thankful that his lot is not cast in this locality.

To illustrate my text, I will report two sample cases, which are not exceptional ones:

December 10th, was called to see A. D., Mexican, aged twenty-three. Found him partly delirious, temperature 106°, pulse 140, breathing very labored, frequent and painful cough. The following history was obtained: Ten days previous he had attended a dance, and left the hall while in a heated condition, it then being 15° below zero in the open air. Two days after he had a severe chill, and on the seventh day stopped working and took to his bed.

Physical examination revealed a pneumonia of the entire right side. Applied a mustard plaster to the affected part, applied ice to his head, administered a saline cathartic, and gave strychnine sulph., gr. 1-30, every two hours. Told the people at whose house he was staying that he would probably not recover, and ordered stimulants to be given him every three hours. On my return next day found the patient much worse, and on inquiry found that he had had none of the medicine left for him and had not been given a drop of any stimulants. The nurses (?) said that as they thought he would die they did not propose to waste any medicines or food on him. After a little straight Mexican swearing and abuse, the attendants were induced to look after the case, which eventually got well, and left the country early one fine morning, leaving both his landlord and doctor to mourn for their bills.

December 15th, was called to see Senora W. J., aged forty-two. A messenger had been sent for me two days previous, but having to pass a saloon before he reached my office, he had not succeeded in reaching me.

On arriving at the house, I found the patient lying on a sheepskin outside the door with nothing on but a thin dress, the thermometer then registering 10° below zero. Patient complained of feeling hot in the house, and had lain on the ground for some little time before my arrival. Temperature 106°, pulse 160, and very weak and frequent; distressing cough. Kidneys had not acted for twenty-four hours, and bowels had not operated for seventeen days. In addition to this, patient was seven months along in pregnancy.

On examination, found a pneumonia of two lower lobes of right lung. The hygienic surroundings were perfect. There was a hole in the roof a foot square; the opening where the door should have been was closed by a curtain of sacks, and the children occupied their time in spitting through the cracks of the house. The only bluff at a bed the house "sported" was a sheep-skin, and at night the children required that.

Introduced catheter and found bladder empty. Gave patient immediately a rectal injection of hot water, and applied hot

turpentine fomentations to lower part of back and abdomen. In about thirty minutes patient's bowels and kidneys both acted freely. I then injected subcutaneously morph. ¼, atropine 1-150; put a mustard plaster over the right side and gave strychnine sulph., gr. 1-30, every three hours. There being nothing in the house to eat but beans and coffee, I induced the husband of the patient to go to the nearest neighbor and get a chicken, and gave instructions to give a little chicken broth to the patient every three or four hours.

Returned next day to find the loving husband lying in one corner of the room drunk, he having ungratefully drank the whisky which I had so generously donated the patient on the day previous. On further inspection, I found that the children had eaten up the chicken broth, etc.

After dragging the husband out in the snow to sober up, and kicking the children, goats, etc., out of the house, I turned my attention to the patient, and found her lying before the empty fire-place, unconscious; pulse not perceptible. Gave her immediately hypodermic injection of strychnine, gr. 1-10, and as soon as I could start a fire, applied warmth. In a short time she rallied and appeared very bright, though very weak. After considerable persuasion and a great deal of threatening, I persuaded the husband to borrow some bedding and otherwise take an interest in the condition of his wife. Did not go to see her the next day, but on second day was called in a great hurry to see her. Found that the disease had involved the upper lobe of the same side. On inquiry, elicited the fact that on the night previous she had walked over twenty-five yards through eight inches of snow, bare-foot, to get some water.

Fearing that some new trouble would arise should I remain away any length of time, I visited the patient every day until she was well along in convalescence.

In conclusion, I would like to say that if the physicians who have their trained nurses and all modern hospital conveniences and appliances, and who are continually putting their statistics into print, would only practice in this country for a season like the present, where la grippe and hard times are alike so prevalent, they would not be in such a rush to print their statistics. For them to gather their statistics and expect to set the pace for the whole country is carrying the joke a little too far. Out here if you want a bath given, you have to give it. If you want an injection given, you have to give it. And it is always a good plan to give at least one dose of medicine when you make your visits, as it is impossible to tell whether they will get any more than what is given them by the doctor himself.

While I do not suppose it will be admitted, I am of the opinion that a physician is entitled to more credit for saving one case such as I have mentioned, than a physician in a well-equipped hospital, and with good nurses and favorable surroundings, is for saving ten.

Attention, Surgeons!

The sterilization of the material of surgical dressings by means of bichloride of mercury or any other metallic salt is a chimera comparable to that of squaring the circle.

Vegetable fiber not possessing basic properties, the problem of sterilizing surgical dressing is limited to the following conditions: To find an antiseptic acid which is not volatile at the ordinary temperature, and the smallest effective quantity of which has no caustic action upon the tissues in contact with it. We have reason to say in the beginning that the condemnation of carbolic acid was not final, and that it is necessary to institute a series of exact observations before rejecting it definitely as a means for sterilizing surgical dressings. Whence it remains certain that carbolized charpie is at present the only portion of our military stores which is really antiseptic.—*Le Progres Medical.*

It has been proven that treating any material with the bichloride does not prevent the culture of pathogenic microbes deposited upon its surface.

There seems, then, no more soluble sub-

limate; it is a self-evident truth chemists have recognized that when dressings are kept in a solution of bichloride, it diminishes progressively, in part by its transformation into calomel; in part, finally, by its combination with the vegetable fiber.

It results from the laborers of chemists and military bacteriologists, that it is very difficult artificially to impart antiseptic properties to materials for dressing which do not possess them naturally, that these qualities are rare and exceptional, and are only to be found in materials sufficiently impregnated with carbolic acid.

Again, culture experiments made upon carbolized dressings have always been futile; their antiseptic action is very constant. To sum up, carbolized materiales alone possess antiseptic properties—*Archives de Medicine et Pharmacie Militaires.*

These quotations are of the greatest interest and importance to surgeons, since hardly an operation is performed at present in which bichloride gauze is not used as a dressing. Surgeons are often at a loss to comprehend how a wound could have become infected. The experiments mentioned have shown conclusively that cultures of germs thrive freely on bichloride gauze, and this serves to illumine the whole subject.

The progressive surgeon will now have to make back tracks and return to carbolized dressings.—*New Albany Medical Herald.*

A Gift to the Medical Profession of Chicago.

Professor N. Senn has given his collection of medical books, vallued at about $50,000, to the Newberry Public Library. *The Journal of the American Medical Association* says that Professor Senn has for many years been engaged in the gathering of this magnificent collection, but for the most part the gems of the library were obtained by purchase from the estate of Professor William Baum, professor of surgery, University of Gottingen. He was one of the founders of the German Congress of Surgeons, and for fifty years has been collecting works on anatomy, physiology, surgery and the old classical authorities. Professor Baum died in 1886, and his estate offered the library for sale. The wish of Professor Baum was that the German Congress of Surgeons should purchase the library, but that organization did not see their way clear to meet the expenses. The administrator of his estate publicly stated that Professor Baum had spent over forty thousand dollars in its purchase. The administrator offered the library to various parties, and the Royal Library of Berlin offered an almost fabulous price for a number of antiquarian volumes contained in the collection, but the administrator, following the wishes of Professor Baum, refused to separate the books, and announced that it would be sold by auction. This coming to the ears of Professor Senn, he at once secured it by making a partial payment, and then withdrew it from sale. The books were shipped to Professor Senn, then in Milwaukee, in fifty-two cases, constituting an entire car load.—*Med. Record.*

The Northeastern Kansas Medical and Protective Association.

The Northeastern Kansas Medical and Protective Association will meet in Holton, Kansas, Tuesday, February 6, 1894.

PROGRAM.

1. Hip-Joint Disease.—Dr. J. C. McClintock, Topeka.

Discussion.—Dr. J. E. Love, Whiting.

2. Metritis and Its Treatment.—Dr. A. B. McCandless, Holton.

Discussion.—Dr. P. L. Jermaine, Holton.

3. Diseases of the Rectum.—Dr. W. H. H. Smith, Granada.

Discussion.—Dr. S. M. Riggs, Muscotah.

4. Pneumonia.—Dr. W. F. Troughton, Seneca.

Discussion.—Dr. B. S. Stewart, Netawaka.

5. The Little Things in Medicine.—Dr. S. E. Sheldon, Topeka.

W. H. H. SMITH, M.D., *Secretary*,
Granada, Kansas.

Cerium Oxalate.

Cerium Oxalate, which was introduced by Professor J. Y. Simpson, in days past, has been resorted to in obstinate cases of vomiting in pregnancy with remarkable success. Doctors Charlton and James have frequently reiterated: "It very seldom fails when given in doses of one-half to two grains."

Latterly the drug has fallen somewhat into disrepute, which is doubtless due to the fact that it has been little understood, and that owing to this misunderstanding the doses administered have been too small to assert a definite effect; also that as it is obtained as a precipitate by the addition of a solution of oxalate of ammonia to a salt of cerium, this to the unchemical mind carries with it a suggestion of a compound of toxic properties. Such, however, is not true; in fact, the salt is so innocuous that it has been employed as a substitute for bismuth, in equally large doses, and in the majority of instances proves even more efficacious—subnitrate of bismuth often provokes nausea by its weight.

Again, cerium oxalate is both sedative and tonic to mucous membrane, hence efficacious in all maladies where there is irritation, either as a result of local inflammation or due to reflex causes throughout the entire length of the *prima viæ*. In chronic intestinal eruption, an incurable and intractable disease in which arsenic and nitrate of silver have long enjoyed the reputation of being efficient, oxalate of cerium may be employed with marked advantage; also, in irritable dyspepsia, attended with gastrodynia, pyrosis and chronic vomiting, its exhibition is usually satisfactory, though in the latter instance, as in the vomiting of pregnancy, the dose should be anywhere from five to ten grains, when oftentimes its value is enhanced by the addition of minute doses of ipecac.

From the fact that cerium oxalate proves a satisfactory remedy in most cases where nitrate of silver is generally employed, and that it is moreover a toxic and sedative that may be administered freely without any danger of discoloration of the skin, it would be well if the drug were given thorough trial in the treatment of epilepsy, chorea and other allied convulsive diseases.—*Medical Age.*

Eleventh International Medical Congress.

A letter directed to the undersigned by the secretary-general of the Eleventh International Medical Congress, and dated December 19, 1893, contains the following communication:

"American members will pay on the English, French and Italian railways single fares for double journeys, and will obtain a reductiou of twenty per cent. on fares for Italian round-trip tickets.

"The documents required for their identification will be sent to you in January, and Americans intending to visit the Congress will have to apply to you for them.

"Full particulars concerning the journeys will accompany the document.

"Messrs. Thos. Cook and Son, London, Paris, Rome, and Naples, should be applied to for accomodation and for tickets for the excursions at Rome, Naples, and to Sicily. Such excursions will be arranged at Rome under the guidance of Mr. Forbes, member of several scientific societies and correspondent of the *Times*—for Naples, three days, including Vesuvius, Pompey, Capri, Sorrento, Castellamare, Bajae, etc.—for Sicily, ten days for Naples, including Messina, Taormina, Catania, Girgenti, Siracusa, Palermo, and return to Naples.

"The fares for members of the Congress will be considerably reduced, and comprise hotel accommodations, carriages, guides, boats, etc.—about 70 frcs. each for the three days and 285 frcs. for the ten days.

"Full particulars concerning these excursions will be contained in a leaflet to be added to the instructions and documents for the journey."

From former communications, the following are herewith quoted:

"The members' fee is five dollars, that of their wives or adult relations, two dollars each. Checks or money orders may be sent to Prof. L. Pagliani, Rome, Italy. Credentials have been promised in the near future. When they arrive (none were received last year), they may be too late for many who have started or are about to start. The undersigned, who is not informed of the cause of delay, proposes to supply, in as official a form as he thinks he is justified in doing, credentials which are expected to be of some practical value. The North German Lloyd has promised to recognize them. It is suggested, besides, that a passport may increase the traveler's facilities.

"Only the North German Lloyd (22 Bowling Green) and the Compagnie Generale Transatlantique (3 Bowling Green) have thought fit to grant any reductions to Congressists.

"The reductions on Italian railways are available from March 1st to April 30th."

A. JACOBI, M.D.,
110 W. 34th Street, New York.

Treatment of Cancer.

Doctor Charpenter, in the *Aerztl. Rundschua*, relates a case in which a few months after the breast had been amputated for sarcoma, there developed in the arm of the same side a tumor extending from the olecranon almost up to the shoulder, with œdema of the hand and violent pain; a few nodes had also formed in the old cicatrix. As the patient obstinately refused further surgical interference, the following treatment was instituted:

An ounce of fluid extract of rumex was instilled in nine times its bulk of water, and two teaspoonfuls ordered taken three times daily, at the same time one-quarter teaspoonful of a mixture of fluid extract phytolacca, diluted with 2¾ drachms of water. The following ointment was ordered applied to the tumor twice daily:

℞ Fluid ext. phytolacca, 1 drachm.
Fluid ext. rumex, 2 ounces.
Yellow wax, 1 ounce.
Benzoinated lard, 3 ounces.

As a result, after one month the scar became free from nodes, and the tumor on the arm had disappeared save for a slight thickening of the integument; and moreover the woman gained fifteen pounds in flesh.—*Medical Age.*

DR. T. W. PEERS has recently undergone a very severe surgical operation, we understand, for tuberculosis of the hip-joint.

Ointment for Ephelis.

℞
White precipitate.....
Subnit. of bismuth...aa..grs. xxv
Spermaceti.....
White wax.....aa..ʒ ij
Sweet oil of almonds.....ʒ ss

F. S. A.—To be rubbed on the affected parts on eight successive nights.

—DR. NEWMANN.

Mixture for Recurrent Boils.

℞
Chlorate of potash....
Lactate of iron...aa..grs. xviij
Tincture of calumba..ʒ ij
Simple syrup.....ʒ iv

M. Three teaspoonfuls in the twenty-four hours.

FAITH is sometimes personified as a dreched female clinging to a sea washed rock; but a better personification would be a bald-headed man buying a bottle of patent hair restorer from a bald-headed barber.—*Peoria Medical Monthly.*